

Application No.: 09/837,911

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Docket No.: 495152000111

REMARKS/ARGUMENTS

In an Office Action dated November 16, 2005, claims 110-129, 133-152, and 156-159 were rejected. Applicant respectfully requests reconsideration of the pending claims.

I. Claim Rejections – 35 USC § 103**A. Claims 110, 119, 122, 123, 127, 129.**

Claims 110, 119, 122, 123, 127, and 129 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,176,667 (the Fairbairn reference) in view of Japanese patent publication 04-311591 (the Hirohiko reference).

Independent claim 110 recites, in part, that the film on the second portion of the substrate surface is plated to the desired thickness after plating the film on the first portion of the substrate surface. Applicant asserts that the Hirohiko reference does not disclose or suggest this claim limitation.

In the Final Office Action, with regard to the Hirohiko reference, the Examiner asserts, “[b]ecause control may no[sic] be sufficiently precise to obtain perfectly uniform deposition at all radial position, the second portion may be plated at a slightly slower rate than the first portion.” Applicant asserts that the Examiner is making an inherency argument. However, as noted in MPEP 2112, in order to rely on inherency, the Examiner must establish that “the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

In the instant case, the Hirohiko reference specifically states the purpose of the invention as being “[t]o obtain a plating film precisely uniform in film quality, composition and film thickness.” (Emphasis added.) Applicants assert that this language, particularly as a stated purpose of the invention, is inconsistent with the Examiner’s proposition that “the second portion may be plated at a slightly slower rate than the first portion.” In particular, plating two portions at different rates when the entire surface of the wafer is being plated at the same time would result in a non-uniform film thickness rather than a precisely uniform film thickness. Thus, the Examiner’s

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proposition is inconsistent with the intended purpose of the Hirohiko reference rather than necessarily flowing from the teachings of the Hirohiko reference.

Thus, Applicant asserts that claim 110 is allowable over the combination of the Fairbairn reference and the Hirohiko reference. Additionally, Applicant asserts that claims 119, 122, 123, 127, and 129, which depend from claim 110, are allowable for at least the reason that they depend from an allowable independent claim.

B. Claims 113, 115, 116, 118, 137, and 141-143

Claims 113, 115, 116, 118, 137, and 141-143 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Fairbairn reference in view of the Hirohiko reference and further in view of U.S. Patent No. 3,880,725 (the Van Raalte reference) or U.S. Patent No. 5,326,455 (the Kubo reference).

Independent claims 113 and 142 recite, in part, that the first and second anodes are connected to the first and second power supplies, respectively. Independent claims 113 and 142 also recite, in part, that the first and second power supplies are configured to alternate in providing power to the first and second anodes, respectively.

Examiner stated in the Final Office Action that “the claim limitation that the power supplies configured to alternate in providing power to the first and second anodes is considered to be a functional limitation related to the manner in which the power supplies are operated... by simply operating the on-off switches on the power supplies of Van Raalte and Kubo, power may be alternately provided to first and second anodes. Alternatively, the power supplies could be selectively disconnected from their sources of power, e.g., unplugging from a wall outlet.”

Applicants assert, however, that the Van Raalte and Kubo references do not disclose the requisite motivation to configure power supplies to alternate in providing power to the first and second anodes as recited in claims 113 and 142. In particular, modifying the Van Raalte and Kubo references to alternate the power supply between the first and second anodes would change their principle of operation. As set forth in MPEP 2143.01, “if the proposed modification or combination

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of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." In *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959), the court reversed a 35 U.S.C. 103 rejection stating that the "suggested combination of references would require a substantial reconstruction and redesign of the element shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813.

In particular, although the Kubo reference discloses a first and second anode, the two anodes have functions that require particular power supplies to each anode. Kubo states that "the main anode is supplied with electricity at a uniform current density throughout the entire width," and that "current densities for the individual sub-anodes are controlled on the basis of the production results so as to make the thickness of the resulting foil uniform." (Emphasis added; column 3, lines 33-38.) Thus, interrupting the power supply to alternate the power between the anodes would defeat the purpose of the invention.

Similarly, although the Van Raalte reference discloses a multitude of anodes, the process requires that the anodes stay in "active relation" to the surface areas of the article to be plated. Column 2, lines 24-27. The Examiner's on/off power alternation scenarios stated above would change the principle of operation of this process by bringing anodes in and out of "active relation" with the article to be plated.

Thus, Applicant asserts that independent claims 113 and 142 are allowable. Additionally, Applicant asserts that claims 115, 116, 118, 137, and 141, which depend from claim 113, and claim 143, which depends from claim 142, are allowable for at least the reason that they depend from allowable independent claims.

C. Claims 111, 112, 114, 117, 120, 121, 124-126, 128, 133-136, 138-140, and 144-152, and 156-159

Applicant asserts that claims 111, 112, 114, 117, 120, 121, 124-126, 128, 133-136, 138-140, and 144-152, and 156-159 are allowable for at least the reason that they depend from allowable independent claims.

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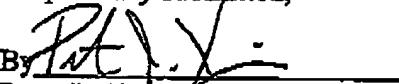
II. Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conversation would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the unlikely event that the transmittal letter is separated from this document and/or the Patent Office determines that an extension and/or other relief is required, Applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 495152000111. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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